INTERNATIONAL SEARCH REPORT

International Application No PCT/EP2004/051094

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 E21B10/36 E21B E21B10/56 E21B10/40 According to International Patent Classification (IPC) or to both national classification and IPC Minimum documentation searched (classification system followed by classification symbols) IPC 7 E21B Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Α US 6 253 864 B1 (HALL DAVID R) 1,15 3 July 2001 (2001-07-03) cited in the application column 8, lines 51-59 figure 9 WO 02/099242 A (EDDISON ALAN MARTYN Α 1,15 ;ANDERGAUGE LTD (GB)) 12 December 2002 (2002-12-12) claim 7 Α WO 01/33031 A (RELTON CORP) 1,15 10 May 2001 (2001-05-10) figure 3 Α US 4 296 825 A (LARSSON LARS E) 1,15 27 October 1981 (1981-10-27) figure 3 -/--X Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention *E* earlier document but published on or after the international "X" document of particular relevance; the claimed invention fillna date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-ments, such combination being obvious to a person skilled document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed in the art. "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 25 August 2004 01/09/2004 Name and mailing address of the ISA **Authorized officer** European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Schouten, A Fax: (+31-70) 340-3016

INTERNATIONAL SEARCH REPORT

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT								
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.						
A	DE 42 00 580 A (HAUSHERR & SOEHNE RUDOLF) 18 March 1993 (1993-03-18) figure 1	1,15						
A	US 3 258 077 A (ORVILLE PHIPPS) 28 June 1966 (1966-06-28) figure 3	1,15						
	·							
	·							
	1	c						
	·							

INTERNATIONAL SEARCH REPORT

Internat plication No PCT/EP2004/051094

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 6253864	B1	03-07-2001	NONE		
WO 02099242	Α	12-12-2002	CA	2458796 A1	12-12-2002
			EP	1415064 A1	06-05-2004
			WO	02099242 A1	12-12-2002
			NO 	20030562 A	24-03-2003
WO 0133031	Α	10-05-2001	AT	248981 T	15-09-2003
			CA	2387295 A1	10-05-2001
		•	DE	60005046 D1	09-10-2003
			DE	60005046 T2	08-07-2004
			EP	1230465 A1	14-08-2002
•			WO	0133031 A1	10-05-2001
		·	US	6374931 B1	23-04-2002
US 4296825	Α	27-10-1981	AT	369505 B	10-01-1983
•			AT	491180 A	15-05-1982
			AU	542437 B2	21-02-1985
		•	AU	6232680 A	09-04-1981
			BR	8006246 A	07-04-1981
			CA	1126255 A1	22-06-1982
			DE Es	3036634 A1 8105815 A1	16-04-1981
			FI	803071 A	01-09-1981 05-04-1981
•		•	FR	2466605 A1	10-04-1981
			GB	2059482 A ,B	23-04-1981
			GB	2099890 A ,B	15-12-1982
			ΪΕ	50509 B1	30-04-1986
•			ĪN	153606 A1	28-07-1984
•			ĴΡ	56059992 A	23-05-1981
		•	ΜX	6730 E	23-05-1986
			NO	802934 A	06-04-1981
	•		SE	440115 B	15-07-1985
	•		SE	8006205 A	05-04-1981
			ZA	8001931 A	25-03-1981
DE 4200580	Α	18-03-1993	DE	4200580 A1	18-03-1993
			WO	9306332 A1	01-04-1993
			EP	0557485 A1	01-09-1993
			FI	932142 A	12-05-1993
US 3258077	· A	28-06-1966	NONE		